Autism & Mental Health: Our Family's Journey

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Take Home Points

- The Asperger confounded the mental health picture (including medication). The mental health confounded the Asperger
- Sometimes it takes a village – but the village members better be talking to each other.
- Just because a problem is hard to solve doesn't mean that everyone isn't trying
- Sometimes drastic situations required drastic situations

Psychotropic Medications Used in Childhood and Adolescence

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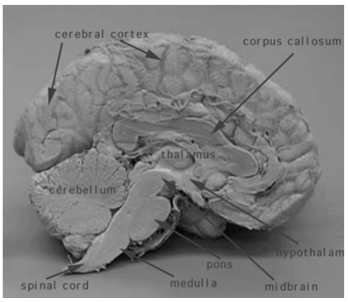
Sagital View of the Brain



Stimulant Medication

- Methylphenidate (Ritalin, Concerta, Focalin, Ritalin SR, Ritalin LA, Daytrana)
- Amphetamines (Dexedrine, Adderall, Adderall XR)
- Mechanism of action not completely understood.
- Stimulants act by causing release of catecholamines from the dopamine axons and blocking their reuptake.

Stimulant Medication

- Stimulant medication is used to treat attention-deficit hyperactivity disorder (ADHD).
- In the classroom, stimulants decrease interrupting and motor restlessness, increase on-task behavior, and reduce ADHD symptoms.

Stimulant Medication

- At home, stimulants improve parent-child interactions, on-task behavior, homework completion, and compliance.
- Stimulants may improve the symptoms of comorbid conduct disorder or comorbid anxiety disorder.

Stimulant Medication

- Common side effects of stimulant medication include:
  - -Headache
  - -Stomachache
  - -Decreased appetite
  - -Jitteriness
  - -Insomnia

Adrenergic Agonists

- Clonidine (Catapres)
- Guanfacine (Tenex, Intuniv)
- First developed as antihypertensive agents.
- Alpha-2 adrenergic agonists have effects on norepinephrine (NE) and other neurotransmitter systems.

Adrenergic Agonists

- Used in the treatment of :
  - -ADHD
  - -Aggressive Behavior
  - -Insomnia
- There have been several case reports of sudden death in children on the drug combination Ritalin and Clonidine.

Adrenergic Agonists

- Common side effects of adrenergic agonists include:
  - -Dry mouth
  - -Drowsiness
  - -Dizziness
  - -Sedation
  - -Hypotension and bradycardia
  - -Fatigue

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Fluoxetine (Prozac)
- Sertraline (Zoloft)
- Paroxetine (Paxil)
- Fluvoxamine (Luvox)
- Citalopram (Celexa)
- Escitalopram oxalate (Lexapro)

Selective Serotonin Reuptake Inhibitors (SSRIs)

- SSRIs used to treat a variety of disorders:
  - -Major Depression
  - -Social Anxiety (Social Phobia)
  - -Generalized Anxiety Disorder (GAD)
  - -Post Traumatic Stress Disorder (PTSD)
  - -Eating Disorders
  - -Obsessive Compulsive Disorder (OCD)

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Common side effects of SSRIs include:
  - -Sexual dysfunction
  - -Nausea
  - -Drowsiness
  - -Constipation
  - -Nervousness
  - -Fatigue

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Common side effects of SSRIs:
  - -Headache
  - -Dizziness
  - -Dry mouth
  - -Insomnia
  - -Restlessness
  - -Tremor

Atypical Antipsychotics

- Clozapine (Clozaril)
- Olanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Risperidone (Risperdal)*
- Ziprasidone (Geodon)
- Aripiprazole (Abilify)

- Risperdal is FDA approved to treat irritability and aggression in autistic individuals.

Atypical Antipsychotics

- Atypical antipsychotic medications are used to treat a range of problems in children and adolescents.
- Clinical effects of the antipsychotic agents are related to their affinity for a variety of receptors in the central nervous system (dopamine, muscarinic, alpha-adrenergic, and histamine receptors).

Atypical Antipsychotics

- Side effects of atypical antipsychotic medications include:

  -Extrapyramidal side effects (acute dystonic reactions (ADRs), drug-induced Parkinsonism, and akathisia)

  -Tardive dyskinesia (characterized by choreoathetoid movements)

  -Seizures

  -Weight Gain

Atypical Antipsychotics

- Additional side effects include:
  - -Liver dysfunction
  - -Sedation
  - -Anticholinergia (dry mouth, blurred vision, constipation, urinary retention, and tachycardia)
  - -Cardiovascular effects (hypotension, QTc prolongation).

Mood Stabilizers

- Lithium carbonate (Eskalith)
- Divalproex sodium (Depakote)
- Gabapentin (Neurontin)
- Topiramate (Topamax)
- Carbamazine (Tegretol, Carbatrol)
- Lamotrigine (Lamictal)

Mood Stabilizers

- Lithium is used to treat mania in adolescents and adults with bipolar disorder.
- Precise neurobiological mechanisms through which lithium reduces acute mania remain uncertain.
- Common side effects—neuronal, gastrointestinal, ocular, and urinary.

Mood Stabilizers

- Depakote—hypotheses about mechanisms of action include its enhancement of GABA accumulation in several cerebral regions
- Common side effects—tremors, thrombocytopenia, alopecia, diarrhea, vomiting, anorexia (seen with high plasma levels).

Mood Stabilizers

- Neurontin—may have antimanic efficacy in adults with bipolar disorder.
- Precise mechanism of action unknown.
- Common side effects are somnolence, dizziness, and asthenia.

Mood Stabilizers

- Topamax—has shown preliminary antimanic and possibly antidepressant efficacy in treatment-refractory, manic patients with bipolar type I.
- Mechanism of action is unknown.
- Common side effects are somnolence and anorexia.

Mood Stabilizers

- Tegretol—used to treat children with a variety of behavior problems.
- The molecular effects underlying Tegretol's mood stabilizing effects not established.
- Common side effects include leukopenia, skin rash, dizziness, diplopia, neutropenia, agranulocytosis.

Mood Stabilizers

- Lamictal—sodium channel blocker.
- May have a bimodal spectrum of efficacy in the treatment of bipolar disorder.
- Common side effects include ataxia, dizziness, diplopia, headache, and skin rash.

Summary

- Psychotropic medications are prescribed frequently to treat various childhood behavioral disorders (ADHD, CD, OCD, BD, etc.)
- Mechanism of action of most psychotropic medications is unknown.
- Polypharmacy is common—need to watch for drug-drug interactions and side effects.

Medication References for Teachers and Parents

- Medication Handouts: Duncan, M. K. (Ed). (2007). Helping Parents, Youth, and Teachers Understand Medications for Behavioral and Emotional Problems: A Resource Book of Medication Information Handouts. (3rd ed.). Washington, D.C.: American Psychiatric Publishing, Inc.
- American Academy of Pediatrics (www.aap.org)
- American Academy of Child and Adolescent Psychiatry (www.aacap.org)

TREATING AUTISM AND CO-MORBID CONDITIONS WITH COGNITIVE BEHAVIORAL THERAPY

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WHAT WE'LL COVER

- comorbid conditions that may be associated with autism
- core principles of cognitive behavior therapy
- how students diagnosed with autism can benefit from CBT
- using CBT in individual or group treatment

COMORBID CONDITIONS THAT MAY BE ASSOCIATED WITH AUTISM

Diagnosis	Symptoms
ADHD	doesn't pay attention; careless errors; easily distracted, disorganized
Oppositional Defiant Disorder	peers may like at first, then avoid, hair-trigger responses, selective memory, sullen, resentful
Generalized Anxiety	excessive, nonproductive worrying, somatic symptoms
Social Anxiety	increased anxiety in social interactions, receiving feedback; eye contact may be reduced, limited conversations, trouble with new situations
Phobias	intense irrational fear when thinking about or approaching neutral stimuli
Obsessive Compulsive Disorder	feels strong urges to perform certain actions or avoid situations to reduce the presence of upsetting thoughts or images (obsessions), worries that things are not "just right;" May feel urge to act (compulsions)
Mood Disorders	changes in appetite, sleep, difficulty concentrating, fatigue, feelings of low self-worth or guilt

COMORBID DISORDERS AND AUTISM

- Sminoff, Pickles, et al (2008) found that 70% of 10 to 14 year old children with autism had at least one comorbid disorder and 41% had two or more.
- Sleep problems have been found to be significantly higher in children with autism.
- Suicidal ideation and attempted suicides appear higher in teens and adults with higher functioning autism and Asperger's Syndrome.

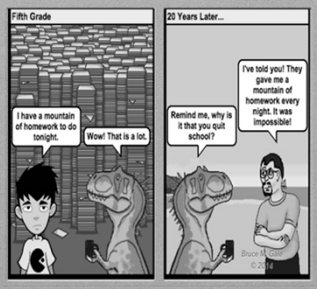
Diagnosis	Prevalence
ADHD*	28.2%
Oppositional Defiant Disorder	28.1%
GAD	13.4%
Social Anxiety Dis	29.2%
Phobias	8.5%
Obsessive Compulsive Disorder	8.2%
Depression	1.4%

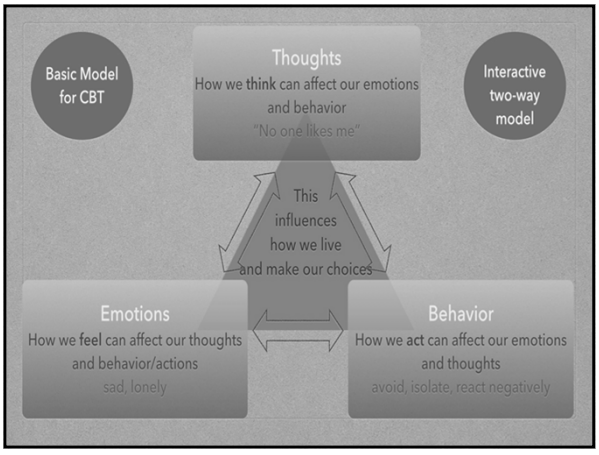
** Of those with ADHD, 84% received a second comorbid diagnosis*

CORE PRINCIPLES OF COGNITIVE BEHAVIOR THERAPY

"THE BASIS OF COGNITIVE THERAPY IS THAT THOUGHTS CAN INFLUENCE FEELINGS, AND THAT ONE'S EMOTIONAL RESPONSE TO A SITUATION COMES FROM ONE'S INTERPRETATION OF THAT SITUATION" *

** Source: Association for Behavioral and Cognitive Therapies website (www.abct.org)*





CYCLIC PROCESS

Activating event, something that sets the occasion for an automatic thought/belief.

Beliefs are triggered in response to the situation.

Consequence is the behavior resulting from the beliefs/thoughts, e.g., refuses to speak to the teacher when called upon, screaming at a peer, having a melt-down

BEHAVIOR EXAMPLES BASED UPON CBT

Activating Event	Automatic Thought/ Belief	Consequence/Response Based on Belief
Being called upon in class	"I always get it wrong and everyone will laugh at me."	Acts up, gets sent out of class
Light-hearted teasing from a peer	"He's always mean to me."	Screams at peer, overreacts to situation
Coming across a difficult question on a quiz	"This test is stupid, I can't answer any of of them."	Rushes through and misses questions that could have been answered correctly

SIMILARITIES BETWEEN ABA AND CBT

- Involves targeting specific behaviors
- Proceed gradually, shaping behaviors over time to targeted goals (however, with CBT the "behavior" are the student's thoughts)
- Incorporate basic learning principles
- Can be implemented individually or at a group level
- Data-based, empirically-derived approaches

DIFFERENCES BETWEEN ABA AND CBT

ABA	CBT
• Cannot see inside the "black box."	• Thoughts are viewed as behaviors to target.
• Behaviors must be observable and measurable	• Individuals can self-report, making thoughts observable
• Treatment is delivered to student, no direct interaction	• Treatment is a **collaborative** process focused on helping the student identify **distortions** in thinking
• Reinforcement is delivered immediately following behavior	• Reinforcement may be imaginal, informational, or social, focused on changes in thinking
• Generalization is carried out across settings by the behaviorist	• Generalization is carried out by student who conducts "experiments" and practice assignments
• Doesn't involve formalized meetings	• Meetings can occur focused on reviewing assignments

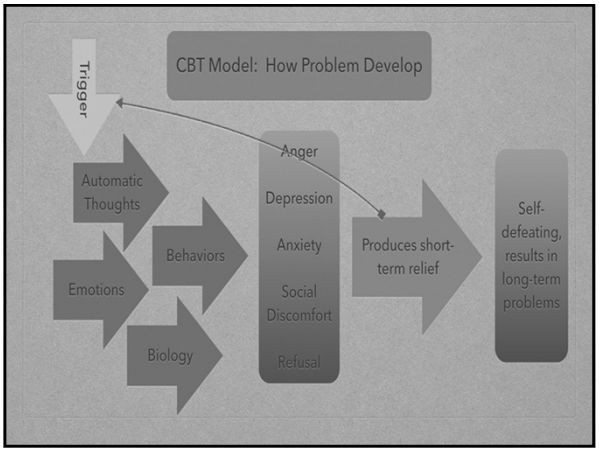
HOW STUDENTS DIAGNOSED WITH AUTISM CAN BENEFIT FROM CBT

NEED TO ASSESS CHARACTERISTICS AND MATCH TREATMENT TO STUDENT STRENGTHS

- **Level of emotional control:** Tolerance, "hair trigger" reactions
- **Language skills:** How concrete?, Can state feelings accurately?
- **Reading comprehension:** Can be words or pictures/icons/rebus symbols
- **Executive function:** Memory skills, planning abilities
- **Social pragmatic skills:** Understand nonverbal cues, facial expressions
- **Environmental awareness:** Realize that their behavior affects others

CORE CBT PRINCIPLES

- Student develops understanding of connection between thoughts and feelings
- Can identify elements of thinking that is irrational or sets the occasion for unwanted feelings/actions
- Learns how thoughts may occur automatically and impact emotions
- Analyzes the nature of thoughts to distinguish between rational and irrational thinking
- Develops a more balanced way of thinking about a situation by noticing when these thoughts occur and replacing them with more adaptive coping style



COMMON TYPES OF DISTORTED THINKING

- **All-or-None Thinking:** Everything is "black or white," no shades of gray, everything is in absolutes (I'll **never** be any good at that; they are **always** against me) (e.g., "S" at the toy store)
- **Mental Filter:** 4 good things occur and 1 bad, only the problem gets remembered
- **Overgeneralization:** Taking a single or unlikely occurrence and assuming that's how things will always be in the future
- **Fortune-Telling:** In the absence of confirmatory data, assuming that something is not likely to work out positively
- **Discounting the Positive:** When something good occurs, it was "luck" or chance, doesn't count

SPECIAL PROCEDURES IN CBT FOR AUTISM

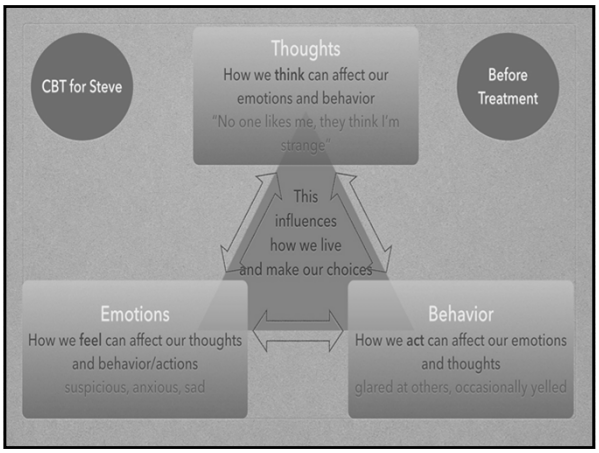
- It may be necessary to create very specific sets of rules to help students determine when they can and cannot display certain behaviors.
- For example, helping a child determine the difference between "telling on others" and "reporting bullying" may require a set of rules that involve being aware and evaluating other children's behavior before "telling."
- It is often the case that changes in thinking doesn't immediately correspondence to feeling better. The student needs to be instructed that new thinking and new ways of behaving have to be practiced many, many times before it begins to feel different. Encouragement is key!

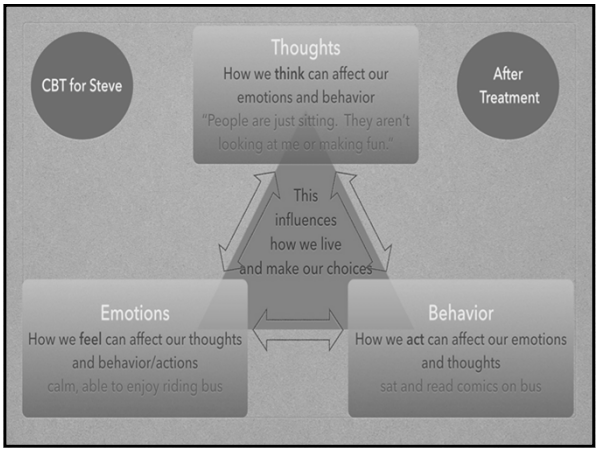
CASE EXAMPLES

- *Steve, 13, who had autism and mild intellectual disability, would become extremely angry whenever he rode the school bus because everyone was constantly staring at him.*

BUS RIDING - STEVE

- *In talking with Steven, his core belief was that no one liked him and they were being "mean" by staring at him on the bus.*
- *Careful questioning revealed that he sat in the front of the bus and, when he turn around, it seemed everyone was staring. He had never considered other possibilities and usually "glared back."*
- *Treatment consisted of convincing him to try an "experiment" to test his belief that he was being stared at.*
- *Treatment succeeded when his core belief changed.*





CASE EXAMPLES

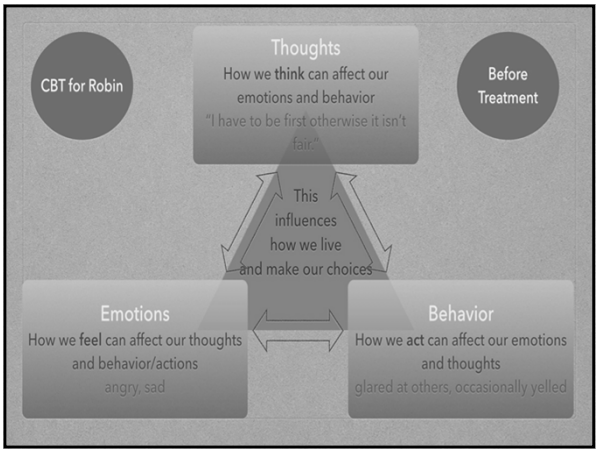
- *Robin, 7, was diagnosed with autism and oppositional defiant disorder. She was constantly rushing to be first in line and, if another child got there first, would shout, "It's isn't fair." Sometimes she would escalate to the point of having a tantrums or would glare at the other students for several minutes after returning to class.*

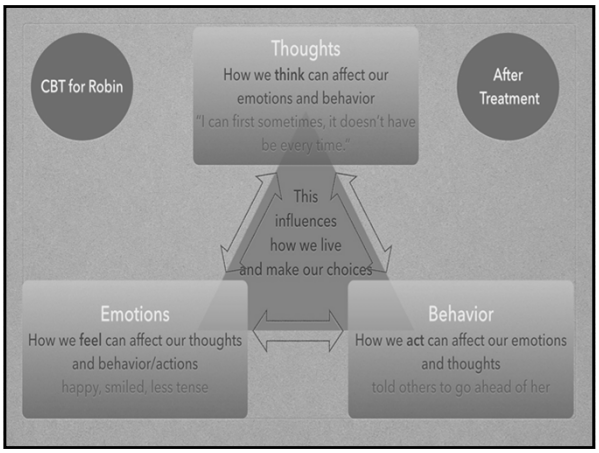
DEFIANT, OPPOSITIONAL - ROBIN

- *Robin's behavior appeared based on the belief that she was entitled to be first because things were "so hard for me." At home, the middle of three siblings, her parents always allowed her to be first because, as they put it to her brother and younger sister, "things are hard enough for Robin, can't you do this one little thing for her?"*
- *Treatment began by asking Robin how it felt when she was first and also how it felt when she couldn't be first. She described that it felt "great, like I won" when she got her way and, "scary, like I'm going crazy and want to hurt someone" when she couldn't have her way.*

DEFIANT, OPPOSITIONAL - ROBIN (CONT'D)

- *The therapist initially helped Robin identify some of the automatic thoughts and physical feelings she experienced. But, also the therapist used Robin's statements as a way to help her recognize that she did have the ability to control her feelings despite how she felt. Focusing on Robin's wish to hurt others combined with the reality that she had never been aggressive at school, the therapist commented, "I'm really impressed that you could control your behavior even though you felt so angry."*
- *The focus continued on other times that Robin had been able to control herself. This was followed by goal setting. It turned out that Robin felt horribly lonely because the other students didn't like being around her when she acted so superior and held on to grudges.*



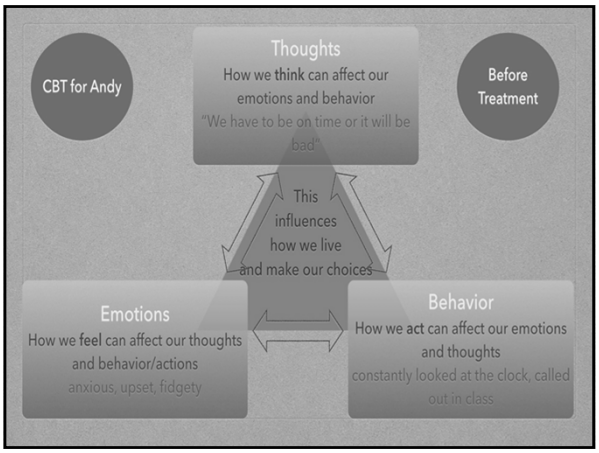


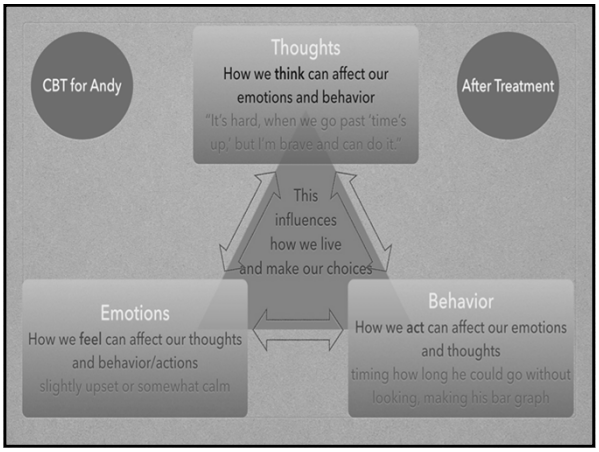
CASE EXAMPLES

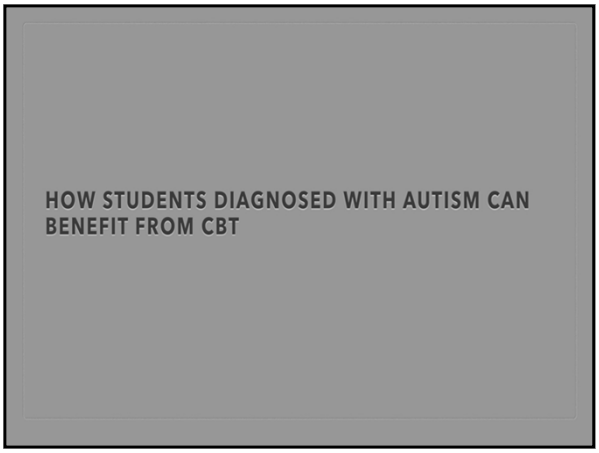
- *Andy, 10, had autism, and was obsessed with time. He was immensely afraid of being late and would become upset if he even thought this might occur. He was constantly asking "how long?" Then, instead of paying attention to what was was being taught, he would compulsively look at his watch and warn others by saying, time's almost up" followed by a louder pronouncement, "time's up!"*

TIME OBSESSED - ANDY

- *Andy's reduced verbal abilities and his level of rigidity made this a challenging task. Giving him a chance to talk about time, it turned out that he would become very excited when the number he was told matched the number on the clock.*
- *Since he couldn't verbalize what bad thing might occur if he was late, he was shown concrete examples., e.g., which is worse, being 2 minutes late or dropping and breaking a plate. By showing him pairs of pictures as to which was "worse," he began to develop the ability to put his obsession with time in perspective.*
- *It also turned out that he would display numerous body movements suggesting anxiety. Teaching him to a) hold his hands in a relaxed "piano playing" position; b) keeping him shoulder down; c) sitting up straight; and d) keeping his mouth very slightly open helped him maintain a more relaxed position.*
- *Finally, an response prevention technique was employed where Andy was given a stopwatch and asked to time how long he could go without saying anything in class about when time "was up." A chart graph showing how many minutes he went was placed on his desk and he recorded how long he went each day.*


CBT for Andy
Thoughts
How we think can affect our emotions and behavior
"We have to be on time or it will be bad"
Before Treatment
This influences how we live and make our choices
Emotions
How we feel can affect our thoughts and behavior/actions
anxious, upset, fidgety
Behavior
How we act can affect our emotions and thoughts
constantly looked at the clock, called out in class


CBT for Andy
Thoughts
How we think can affect our emotions and behavior
"It's hard, when we go past 'time's up,' but I'm brave and can do it."
After Treatment
This influences how we live and make our choices
Emotions
How we feel can affect our thoughts and behavior/actions
slightly upset or somewhat calm
Behavior
How we act can affect our emotions and thoughts
timing how long he could go without looking, making his bar graph


HOW STUDENTS DIAGNOSED WITH AUTISM CAN BENEFIT FROM CBT

BASIC STEPS

1. This is a collaborative process, focused on gently and patiently helping the student identify their overreactions, cognitive distortions, and core beliefs that may be addressing.
2. Rather than focusing on only observable behaviors, the treatment centers on helping the individual to be more self-sufficient in recognizing when they are engaging in cognitive distortions ("D" –> "B").
3. Validating the student's experience is a central component and CBT therapists are often viewed as: present, warm, engaging, and supportive.

Main Steps: a) Identify upsetting events; b) identify emotions linked to thoughts; c) use charting to increase awareness of cognitive distortions and create a more balanced, convincing, rational response to address the situation

BASIC STEPS CONT'D

1. Just as with ABA, it is important to identify the behavioral targets, however this may include thoughts, feelings, and emotions.
2. Need to establish a baseline, can be done through a thought record.
3. Help them identify what thoughts they wish to challenge and how to think more logically about situations. May require specialized rules for some individuals.
4. Critical to create "experiments" to "test out" faulty assumptions/perceptions/ beliefs. This is data collection.
5. Must be practiced across situations to promote more adaptive coping and resilience.

SUMMARY OF TREATMENT COMPONENTS

- Activating event
- Beliefs
- Consequence
- Dispute
- Effective Coping

Example of Triple Column Charting

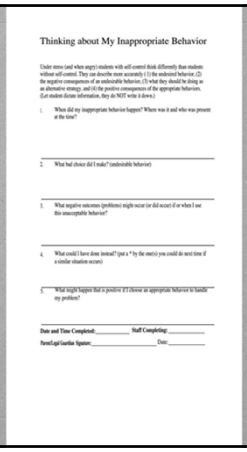
(B) Automatic Thoughts	(D) Distortions	(E) Rational Responses
Today is going to be bad, just like every other day	Fortune Telling	Some days are bad, but that doesn't mean every day will be like that
No one likes me, so there's no point in talking	Overgeneralization	I get scared when I think about talking to others. Maybe if I just say "hi," some people will say it back
This homework is stupid	All-or-None Thinking	Some parts are hard, but maybe I can do the others and ask for help in class
Everything makes me angry	Mental Filter	I like when I play video games and chat online, so maybe that isn't always true

A primary goal is to break up the rigidity of the cognitive distortions and promote "shades of gray" thinking

Thinking about my behavior can also be used for CBT

HOW TO USE

1. WHEN STUDENT IS CALM, COMPLETE THIS;
2. OFFER TO WRITE FOR STUDENT IF REQUESTED;
3. STAY NEUTRAL AND SUPPORTIVE;
4. ASK OTHERS TO REMAIN CALM AND PROBLEM SOLVING FOCUSED WHEN INTERACTING WITH STUDENT



Thinking about My Inappropriate Behavior

Under stress (and when angry) students with self-control think differently than students without self-control. They can describe more accurately (1) the undesired behavior, (2) the negative consequences of an undesirable behavior, (3) what they should be doing as an alternative strategy, and (4) the positive consequences of the appropriate behaviors. (Let student dictate information, they do NOT write it down.)

1. When did my inappropriate behavior happen? Where was it and who was present at the time?

2. What bad choice did I make? (undesirable behavior)

3. What negative outcomes (problems) might occur (or did occur) if or when I use this unacceptable behavior?

4. What could I have done instead? (put a * by the one(s) you could do next time if a similar situation occurs)

5. What might happen that is positive if I choose an appropriate behavior to handle my problem?

Date and Time Completed:_____ **Staff Completing:**_____

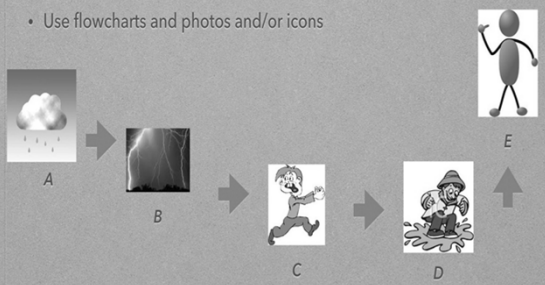
Parent/Guardian Signature:_____ Date:_____

HELPFUL TECHNOLOGY FOR CBT INTERVENTIONS

- Online surveys can be set up so a student accesses it whenever he/she has a problem. The survey carries them through a CBT exercise (I often have them create the form with me). It can be sent to a teacher or others upon completion, plus maintains a record of when and where problems/distorted thinking occurred.
- Animation exercises, such as putting together a cartoon or using avatar software can be extremely useful and motivating to students.
- Both approaches can be done at the individual or group level.

WHAT ABOUT CHILDREN WHO CANNOT READ?

- Use flowcharts and photos and/or icons



WORKING WITH GROUPS

- Foster statements that promote more balanced thinking and socially reward them.
- Reward students when they notice the positive behavior demonstrated by their peers
- Focus on teaching them to self-monitor more effectively and comment on their behavior as a prelude to self-regulation
- Using animation to create group stories, allow students to be the voice of the characters. Preserve confidentiality by using only animation and comics, never student's photographs. Especially for shy and oppositional kids, it allows them to create and see how changes in thinking can lead to problem solving that produces more adaptive coping and behaving
- Help parents establish routines at home that reinforce and carry-over strategies learned in group